

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>A. LIFE SCIENCE</p> <p>1. Plants</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • predict what seeds need to sprout. • learn science words by using them. 	<ul style="list-style-type: none"> • Have students choose four environments in which to try to grow seeds, such as: a wet sponge and a dry sponge; a cup of water; and, a cup of sand. Write their predictions on chart paper. Gather data over several days and then use the data to check their predictions and construct a reasonable explanation. • Students can make a science words folder. When they see a new science word, they can write it on a card and draw a picture to show the word. • Have students pretend to be plants growing in a garden and show what happens on a very windy day. Ask students if they can name the plant parts that were moved by the wind and the part that was not. Complete the experiment on p. A9. Discuss the results using Lab Manual p. 1. 	<ul style="list-style-type: none"> • Flip Chart A1c-d • Cups • Radish Seeds • Sponges • Sand & Water • Chart Paper • Unit Overview - Flip Chart A2-3 • Song - Flip chart A4-5 (also on cassette) • Science Literature "The Snow Glory" - <u>Henry & Mudge in Puddle Trouble</u> • Flip Chart A6-7 • Index Cards • Crayons • Instructional Resources p.4 • Flip Chart A8-9 • Plant • Cup of Water • Foil • Crayon • Tape 	<ul style="list-style-type: none"> • Teacher Observation • Completed Cards • Lab Manual • Teacher Observation 	<ul style="list-style-type: none"> 5.5 A-1 5.8 B-1 5.10 A-1 5.1 A-1,2,4 B-2 5.3 D-1 5.4 B-1 C-1 5.2 A-1 5.5 A-2 5.1 A-1,2,4 B-2 5.3 D-1 5.4 B-1

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>A. LIFE SCIENCE</p> <p>1. Plants (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • observe how water moves up a stem. (Lesson 2) • recognize what leaves do. (Lesson 3) • recognize that leaves have different characteristics. 	<ul style="list-style-type: none"> • Put celery in a cup of colored water. Students can draw their predictions. The following day, break the celery and draw what happens. Repeat the activity but first allow the end of the celery stalk to dry out before placing in colored water. • The students can make a leaf rubbing by placing a leaf between two pieces of paper and rubbing the side of the crayon over the leaf. After observing and comparing with others, ask: "How do you think leaves get the water they need to help make food for the plant?" • Invite students to classify their collection of leaves based on different characteristics such as size, shape, or color. • Make a class collage of different kinds of leaves. Glue the leaves to mural paper and then label the leaves. 	<ul style="list-style-type: none"> • Flip Chart A10-11 • Lab Manual p. 2 • Cup of Water • Food Color • Celery • Flip Chart A12-13 • Lab Manual p. 3 • www.sfscience.com • Wall Chart p. 2 • Paper • Crayons without wrapper • Leaves • Flip Chart A13a • Leaves • Mural Paper 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<p>5.1 A-1,2,3,4 B-2 5.4 B-1 C-1</p> <p>5.1 A-1,4 B-2 5.3 C-1 5.4 B-1</p> <p>5.6 A-1 5.1 A-1,2 B-2 5.3 A-1,2,3 B-1,2 C-1 5.4 B-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>A. LIFE SCIENCE</p> <p>1. Plants (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • describe how a seed grows into a plant. (Lesson 4) • describe how a flower develops into a fruit. (Lesson 5) 	<ul style="list-style-type: none"> • After reading the story "The Little Red Hen," have students tell how the hen planted the seeds and cared for the wheat until it could be harvested. • Have students sort seeds and tape them on Wall Chart 3. Record the kind of seed in the blank. Students can draw and tape a picture of the seed source in the box next to the seeds. • Read a story about Johnny Appleseed. Discuss how apples are grown. • Display and sample different varieties of apples and apple foods. • Use the kit from the Janvier Library called "A Tree Through the Seasons." • Make copies of Interactive Transparency #1 for students to cut and paste as you instruct using the overhead projector. 	<ul style="list-style-type: none"> • Flip Chart A14-15 • Lab Manual p. 5-6 • "The Little Red Hen" • Wall Chart 3 • Various Seeds • Drawing Paper • Flip Chart A16-17 • Johnny Appleseed Storybook • Library Kit - "A Tree Through the Seasons" • Interactive Transparency #1 • Overhead Projector 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<p>5.5 A-1 5.1 A-1,2 B-2 5.4 B-2</p> <p>5.10 A-1 B-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>A. LIFE SCIENCE</p> <p>1. Plants (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • experiment to determine whether water affects a plant's growth. (Lesson 6) • identify roots, stems, leaves, seeds, and fruits that people can eat. (Lesson 7) 	<ul style="list-style-type: none"> • Students observe and record what happens to two plants when one is watered and one is not. Discuss. Then ask: "What will happen if you give a plant too much water?" Discuss. • Have students guess what food items are hidden in a bag. They can guess by shaking, listening, and touching. Use apple, carrot, asparagus or broccoli, spinach, raw peas. Then have students tell what part of a plant they think each food is. • Have students bring in empty food containers. Read the ingredients and determine which contain plant parts. • Ask students to tell what foods they would no longer be able to eat if plants disappeared from our planet. 	<ul style="list-style-type: none"> • Flip Chart A-18-19 • Lab Manual p. 7-8 • 2 plants in containers • Water • Flip Chart A20-21, 23a • Lab Manual p. 11, 15 • Food items - ex.: apple, carrot, asparagus, broccoli, spinach, raw peas • Empty food containers 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<ul style="list-style-type: none"> 5.5 A-1 5.8 B-1 5.10 A-1 5.1 A-1,2,4 B-2 5.3 A-1,2,3 5.4 B-1 5.1 A-1,4 B-2 5.4 B-1

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																								
<p>A. LIFE SCIENCE</p> <p>2. Animals (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • compare and contrast animals, according to size, shape, and other characteristics. (Lesson 1) • compare and contrast animals according to how they move. (Lesson 2) • compare and contrast animals according to body coverings. (Lesson 3) 	<ul style="list-style-type: none"> • Use the clay animals from the last lesson. Arrange all the animals with four legs in a group. Ask: "How are all these animals alike?" • When looking at different animals, ask students to tell how they can figure out which ones belong together. • Have students name several animals and tell how they move. List on a chart. • Draw a picture that shows an animal moving. Make into a class book by grouping together animals that move in the same way. • Ask students why the animal cannot fly like a bird or slither like a snake. Discuss what body parts are necessary to move in certain ways. • Have students name the animals that are covered with fur, feathers, scales, and a shell. Record students' responses on chart paper. • Invite students to make up a riddle about an animal that includes a clue about its covering and how it moves. 	<ul style="list-style-type: none"> • Flip Chart A30-31 • Lab Manual p. 17 • Flip Chart A32-33 • Lab Manual p. 19 • Chart Paper • Drawing Paper • Wall Charts #7, 8 • www.sfscience.com • Flip Chart A34-35 • Lab Manual p. 20, 21 • Chart Paper • "Feathers for Lunch" by Lois Ehler 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.1</td> <td>A-1,4</td> </tr> <tr> <td>5.4</td> <td>B-2</td> </tr> <tr> <td></td> <td>B-1</td> </tr> <tr> <td>5.1</td> <td>A-1,4</td> </tr> <tr> <td>5.4</td> <td>B-2</td> </tr> <tr> <td></td> <td>B-1</td> </tr> <tr> <td>5.6</td> <td>A-2</td> </tr> <tr> <td>5.1</td> <td>A-1,2,4</td> </tr> <tr> <td></td> <td>B-2</td> </tr> <tr> <td>5.3</td> <td>C-1</td> </tr> <tr> <td></td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> </table>	5.1	A-1,4	5.4	B-2		B-1	5.1	A-1,4	5.4	B-2		B-1	5.6	A-2	5.1	A-1,2,4		B-2	5.3	C-1		D-1	5.4	B-1
5.1	A-1,4																												
5.4	B-2																												
	B-1																												
5.1	A-1,4																												
5.4	B-2																												
	B-1																												
5.6	A-2																												
5.1	A-1,2,4																												
	B-2																												
5.3	C-1																												
	D-1																												
5.4	B-1																												

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																						
<p>A. LIFE SCIENCE</p> <p>2. Animals (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • describe characteristics of insects. (Lesson 4) • learn to make a model of ant. (Lesson 5) • identify the basic needs of animals. (Lesson 6) 	<ul style="list-style-type: none"> • Play a variation of "Follow the Leader" in which the leader pretends to be an insect, such as a butterfly flitting from flower to flower. Then have students talk about how each insect moved. • Students can make a model of an ant with clay, with three main body parts. Add pipe cleaners for legs and antennae. • Students can make butterfly models, using clay for the body parts and construction paper for the wings. • Make an insect mobile. • Students can make a chart to be displayed in the classroom telling the four things animals need to live. • Divide the class into four groups. Each group will draw a mural showing animals demonstrating one basic need of animals. • Students can cut pictures out of magazines or draw pictures that show how animals get the things they need. The pictures can be pasted on Wall Chart p. 10. 	<ul style="list-style-type: none"> • Flip Chart A36-37 • Interactive Transparency #2 • Flip Chart p. A-38-39 • Lab Manual p. 22, 23 • Clay • Pipe Cleaners • Construction Paper • Hanger • Flip Chart A640-41 • Chart Paper • Drawing Paper • Mural Paper • Wall Chart p. 10 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.5</td> <td>A-1</td> </tr> <tr> <td>5.1</td> <td>B-1</td> </tr> <tr> <td>5.1</td> <td>A-1,2</td> </tr> <tr> <td></td> <td>B-2</td> </tr> <tr> <td>5.3</td> <td>A-1,2,3</td> </tr> <tr> <td></td> <td>C-1</td> </tr> <tr> <td></td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td>5.5</td> <td>A-1</td> </tr> <tr> <td>5.8</td> <td>B-1</td> </tr> <tr> <td>5.10</td> <td>A-1</td> </tr> </table>	5.5	A-1	5.1	B-1	5.1	A-1,2		B-2	5.3	A-1,2,3		C-1		D-1	5.4	B-1	5.5	A-1	5.8	B-1	5.10	A-1
5.5	A-1																										
5.1	B-1																										
5.1	A-1,2																										
	B-2																										
5.3	A-1,2,3																										
	C-1																										
	D-1																										
5.4	B-1																										
5.5	A-1																										
5.8	B-1																										
5.10	A-1																										

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																																		
<p>A. LIFE SCIENCE</p> <p>2. Animals (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • compare animal parents and babies. • describe how parents help babies. (Lesson 7) • recognize that each animal has its own habitat. • use tally marks to organize and record data; • identify and compare living and nonliving things. (Lesson 1) 	<ul style="list-style-type: none"> • Identify animals on Wall Chart p. 11. Cut out the pictures and have the students match the babies and parents. Ask which babies look like their parents and which ones do not. Paste the picture pairs on the Wall Chart. • Students can write and illustrate in their journals two ways that animals take care of their babies. • Sing the song “The Right Habitat.” • Introduce new vocabulary for Chapter 3. • Sing the song from Magpie “Have to Have a Habitat.” • Students will count animals seen in the park, count apples in a basket, and record with tally marks. • Students can identify living and nonliving things and record the information on Wall Chart p. 13 	<ul style="list-style-type: none"> • Flip Chart p. A42-43 • Journal • Lab Manual p. 24 • Wall Chart p. 11 • Review Flip Chart A44-45 • Flip Chart A46-47 • Cassette • Songs & Activities Pkg. P. 13-14 • Instructional Resources p. 19 • “Magpie” Cassette • Flip Chart A48-49 & A50-51 • Instructional Resources p. 20 • Lab Manual p. 25 • Wall Chart p. 13 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Assessment Pkg. P. 11-12 • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.5</td> <td>A-1</td> </tr> <tr> <td></td> <td>C-1</td> </tr> <tr> <td>5.8</td> <td>B-1</td> </tr> <tr> <td>5.10</td> <td>A-1</td> </tr> <tr> <td>5.1</td> <td>A-1,2</td> </tr> <tr> <td></td> <td>B-2</td> </tr> <tr> <td>5.3</td> <td>A-1,3</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.5</td> <td>B-1</td> </tr> <tr> <td>5.10</td> <td>A-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.1</td> <td>A-1,2</td> </tr> <tr> <td></td> <td>B-2</td> </tr> <tr> <td>5.3</td> <td>A-2,3</td> </tr> <tr> <td></td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> </table>	5.5	A-1		C-1	5.8	B-1	5.10	A-1	5.1	A-1,2		B-2	5.3	A-1,3	5.4	B-1			5.5	B-1	5.10	A-1			5.1	A-1,2		B-2	5.3	A-2,3		D-1	5.4	B-1
5.5	A-1																																						
	C-1																																						
5.8	B-1																																						
5.10	A-1																																						
5.1	A-1,2																																						
	B-2																																						
5.3	A-1,3																																						
5.4	B-1																																						
5.5	B-1																																						
5.10	A-1																																						
5.1	A-1,2																																						
	B-2																																						
5.3	A-2,3																																						
	D-1																																						
5.4	B-1																																						

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>A. LIFE SCIENCE</p> <p>2. Animals (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • define a habitat; • tell what a habitat provides. (Lesson 2) • tell how some animals adapt to an ocean habitat. (Lesson 3) 	<ul style="list-style-type: none"> • Ask students to draw pictures on self-stick notes of something they might see in a garden. Arrange the notes on Wall Chart p. 14. • Use the completed garden on Wall Chart p. 14 as the setting for a class story in which a gardener tells about the animals and plants in his/her garden. As the students dictate sentences, record them on chart paper. • Help students brainstorm a list of living things in the ocean. Record these on chart paper. • Display Wall Chart p. 15. Have students identify and tally the plants and animals that do not live in the ocean. Count the tally marks and record the totals. • Cut out magazine pictures of marine life for an undersea bulletin board display. Name the animals. Discuss each animal's special body parts that make life in the sea possible. 	<ul style="list-style-type: none"> • Flip Chart 52-53 • Lab Manual p. 27, 29 • Wall Chart p. 14 • Self-stick notes • <i>www.sfscience.com</i> • Chart Paper • Flip Chart A54-55 • Chart paper • Magazines • Wall Chart p. 15 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<p>5.5 A-1,2 5.10 A-1 5.1 A-1,2,4 B-2 5.3 A-1,2,3 D-1 5.4 B-1</p> <p>5.5 B-1 5.10 A-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/ MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>A. LIFE SCIENCE</p> <p>2. Animals (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • describe a forest and a desert habitat. (Lesson 4) • make a habitat for pill bugs. 	<ul style="list-style-type: none"> • Students can fold a piece of drawing paper in half. Label one side "Forest" and the other side "Desert." Illustrate and discuss. Following the lesson, students can add animals that live in each habitat. • Cut out the pictures at the bottom of Wall Chart p. 16. Identify each living thing and paste the pictures in the correct habitat scene. • Make a word web with a pill bug in the center. Then write words or draw pictures to describe the things they think the pill bug will need in their habitat. • After creating the pill bug habitat, provide children with a hand lens so they can observe the pill bug's features more closely. 	<ul style="list-style-type: none"> • Flip Chart A56-57 • Interactive Transparency #3 • Wall Chart p. 16 • Drawing paper • Flip Chart A58-59 • Review Flip Chart A60-61 • Lab Manual p. 31 • Chart paper • Hand lens • Plastic jar, soil, water, rock, leaves, food, pill bugs, cheesecloth, rubber band 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Assessment Pkg. P. 17-18 	<p>5.5 B-1 5.10 A-1</p> <p>5.5 A-1 B-1</p> <p>5.10 A-1 5.1 A-1,2,4 B-2</p> <p>5.3 A-1,3 B-1,2</p> <p>5.4 B-1 C-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD														
<p>B. PHYSICAL SCIENCE</p> <p>1. Grouping Objects</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • learn more about solids, liquids, and gases. • group objects according to various properties. (Lesson 1) 	<ul style="list-style-type: none"> • Ask students about when and where they have noticed water as a solid, a liquid or a gas. Record responses on a KWL Chart on a bulletin board. • Make predictions about what will sink and what will float. Record predictions on a chart paper. • Sing the song "Make a Little List." • Read and discuss a book from the Science Literature Library "What is the World Make of?" • Display 2 groups of objects. Ask students to think of a label for each group, such as "Things to Write With" or "Things to Read." Discus the suggested labels. • Fill a large tub with water and have the children test objects to find out if they will sink or float. Students can graph the results on Wall Chart p. 18 with self-stick notes. • Observe and classify birds at <i>www.sfscience.com</i>. • Ask "How can you get a paper clip to float?" Have students share, then test, their ideas. 	<ul style="list-style-type: none"> • Flip Chart B4-5 • Instructional Resources p. 27 • Songs & Activities Pkg. p. 15-16 • Song cassette • KWL Chart • "What is the World Made of?" • Flip Chart B6-7 • Lab Manual p. 37 • Wall Chart p. 18 • Classroom objects • <i>www.sfscience.com</i> • Self-stick notes 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.6</td> <td>A-1,3</td> </tr> <tr> <td>5.2</td> <td>A-1</td> </tr> <tr> <td>5.6</td> <td>A-1</td> </tr> <tr> <td>5.1</td> <td>A-2,3,4</td> </tr> <tr> <td></td> <td>B-2</td> </tr> <tr> <td>5.3</td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> </table>	5.6	A-1,3	5.2	A-1	5.6	A-1	5.1	A-2,3,4		B-2	5.3	D-1	5.4	B-1
5.6	A-1,3																		
5.2	A-1																		
5.6	A-1																		
5.1	A-2,3,4																		
	B-2																		
5.3	D-1																		
5.4	B-1																		

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
B. PHYSICAL SCIENCE 1. Grouping Objects (cont'd.)	Students will be able to: <ul style="list-style-type: none"> • describe the properties of solids and liquids. (Lesson 2) • describe the properties of gases. (Lesson 3) 	<ul style="list-style-type: none"> • Make up riddles about solids and liquids such as “I come from fruit. You can pour me. My color is the same as the name of the fruit I come from. What am I?” (orange juice) • Have students identify the items on Wall Chart p. 19 and tell why they belong in each column. Ask students to draw or cut from magazines other pictures of solids and liquids and paste to the chart. Ask how they know it is a liquid or a solid. • Blow up a balloon. Ask “What do you think is inside the balloon?” (air) Slowly release some of the air and ask students to describe what happens. • Tell students to place their hands in front of their mouths, take a deep breath, exhale, then describe what they observe. Explain that we breathe in air, which is a mixture of gases including oxygen, and we breathe out the gases along with another gas, carbon dioxide. 	<ul style="list-style-type: none"> • Flip Chart B8-9 • Wall Chart p. 16 • Drawing paper • Magazines • Flip Chart B10-11 • Lab Manual p. 38 • Balloon • Wall Chart p. 20 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	5.6 A-1,3 5.1 A-1,2,4 B-2 5.4 B-1

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																								
<p>B. PHYSICAL SCIENCE</p> <p>1. Grouping Objects (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • use prior knowledge and picture clues to make predictions. • experiment to see whether the kind of soap used affects how long a bubble lasts. (Lesson 4) • draw shoes and classify them in a graph. 	<ul style="list-style-type: none"> • Have volunteers predict what the weather will be like when we leave school today. Guide students to see that predictions are based on prior knowledge and observation. • Show a picture of a dog and an apple. Ask a question about the likelihood of finding the objects in a particular place - ex.: the refrigerator. Students answer using “more likely” and “less likely.” • Students can fold a piece of drawing paper in half. Label one side “Forest” and the other side “Desert.” Illustrate and discuss. Following the lesson, students can add animals that live in each habitat. • Students will make predictions as to which soap bubble will last longer and tell why. • Students can repeat the experiment but use something else to make the bubbles. • Students will trace around their shoes and color it. Write words to describe it. 	<ul style="list-style-type: none"> • Flip Chart B12-13 • Instructional Resources p. 28 • Picture of a dog • Apple • Flip Chart B14-15, 15q • Lab Manual p. 39-40, 41 • Hand soap • Dish soap • 2 Plastic lids • 2 Straws • Safety goggles 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.1</td> <td>A-1</td> </tr> <tr> <td></td> <td>B-1</td> </tr> <tr> <td>5.3</td> <td>C-1</td> </tr> <tr> <td>5.5</td> <td>B-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.6</td> <td>A-1</td> </tr> <tr> <td>5.1</td> <td>A-1,2,4</td> </tr> <tr> <td></td> <td>B-1,2</td> </tr> <tr> <td>5.3</td> <td>A-1,2,3</td> </tr> <tr> <td></td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td></td> <td>C-1</td> </tr> </table>	5.1	A-1		B-1	5.3	C-1	5.5	B-1			5.6	A-1	5.1	A-1,2,4		B-1,2	5.3	A-1,2,3		D-1	5.4	B-1		C-1
5.1	A-1																												
	B-1																												
5.3	C-1																												
5.5	B-1																												
5.6	A-1																												
5.1	A-1,2,4																												
	B-1,2																												
5.3	A-1,2,3																												
	D-1																												
5.4	B-1																												
	C-1																												

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>B. PHYSICAL SCIENCE</p> <p>1. Grouping Objects (contd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • understand that water can change from a solid to a liquid to a gas. (Lesson 5) • observe the results of the evaporation of water and salt water; (Lesson 6) • observe that ice can change into water and evaporate. 	<ul style="list-style-type: none"> • Display a bowl of ice cubes and a bowl of water. Ask how they are alike and different. How will the ice change if we leave it out? How will the water change if we put it in the freezer? • Invite students to pretend that they are ice cubes melting and then to pretend they are water in an ice cube tray turning into ice cubes. • Students may think that salt is a liquid because it can be poured and it takes the shape of its container. Let students observe salt crystals with a hand lens, pointing out that the salt is hundreds of solid crystals. • Repeat the experiment of B18-19. This time offer a variety of items to mix with the water to make a solution. • Invite students to draw on the chalkboard with ice. 	<ul style="list-style-type: none"> • Flip Chart B-14-15 • Interactive Transparency #4 • Overhead Projector • Ice cubes • Water • Flip Chart B18-19, 19a • Review Flip Chart B20-21 • Lab Manual p. 43,44 • Salt • Hand lens • Chalkboard • Ice 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Chapter Assessment p. 23-24 	<p>5.6 A-3</p> <p>5.6 A-2,3</p> <p>5.1 A-1,2,4</p> <p>5.3 B-1,2</p> <p>5.4 A-1,3</p> <p> B-1,2</p> <p> B-1</p> <p> C-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD				
<p>B. PHYSICAL SCIENCE</p> <p>2. Sound, Light, & Heat</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • learn about sound, light, and heat. • learn to describe sounds as loud or soft. (Lesson 1) 	<ul style="list-style-type: none"> • Ask students to tell when they notice sound, light, and heat. • Sing the song “Dark, Cool and Quiet.” • Make a KWL chart for sound, light, and heat. Record student responses. • Ask students to close their eyes and listen as you do the following: drop a book on the floor, tape your desk with a pencil, hum and stomp your foot. Ask students to identify the sounds. • Ask students to tell when or where they might need to shout and to whisper. • Ask the following question: “How can you make patterns of loud and soft sounds with your hands?” 	<ul style="list-style-type: none"> • Flip Chart B22-23 • Instructional Resources p. 35 • Songs & Activities Pkg. p. 17-18 • “The Bravest Cat” by Laura Driscoll • Song cassette • KWL Chart • Flip Chart B24-25 • Lab Manual p. 45 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">5.6 5.1</td> <td style="width: 50%; vertical-align: top;">A-1 A-1</td> </tr> <tr> <td style="vertical-align: top;">5.1 5.2 5.3 5.4</td> <td style="vertical-align: top;">A-1,4 B-1,2 B-1 C-1 B-1</td> </tr> </table>	5.6 5.1	A-1 A-1	5.1 5.2 5.3 5.4	A-1,4 B-1,2 B-1 C-1 B-1
5.6 5.1	A-1 A-1								
5.1 5.2 5.3 5.4	A-1,4 B-1,2 B-1 C-1 B-1								

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																
<p>B. PHYSICAL SCIENCE</p> <p>2. Sound, Light, & Heat (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • understand that sound is made when an object vibrates; • describe sounds as high or low. (Lesson 2) • observe that sound travels differently through a solid, a liquid, and a gas. (Lesson 3) • make a musical instrument. 	<ul style="list-style-type: none"> • Ask students to listen as you sing a high note, followed by a low note. Then describe the difference between the two notes. • Read or tell the story “Three Billy Goats Gruff.” Invite students to imitate the high and low voices of the goats. • Have students place their fingers gently on their throats as they hum their favorite songs and then describe what they feel (vibrations). • Tell students to close their eyes and listen as you gently tap the chalkboard surface. Ask students to identify and describe the sound they hear. Then have the students place an ear on the chalkboard surface and listen as you gently tap again. Ask them to compare the tapping sounds. • Ask: “Suppose you were trying to hear footsteps. Would you put your ear next to the ground or would you hold your head up in the air?” Discuss. • Students are encouraged to make a musical instrument at home and bring it into class to share. 	<ul style="list-style-type: none"> • Flip Chart B26-27 • Lab Manual p. 45 • “Three Billy Goats Gruff” • Flip Chart B28-29, 29a • Lab Manual p. 47,48 • Chalkboard 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.1</td> <td>A-1,2 B-1,2</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td>5.7</td> <td>B-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.1</td> <td>A-1,2,4 B-2</td> </tr> <tr> <td>5.3</td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1 C-1</td> </tr> <tr> <td>5.7</td> <td>B-1</td> </tr> </table>	5.1	A-1,2 B-1,2	5.4	B-1	5.7	B-1			5.1	A-1,2,4 B-2	5.3	D-1	5.4	B-1 C-1	5.7	B-1
5.1	A-1,2 B-1,2																				
5.4	B-1																				
5.7	B-1																				
5.1	A-1,2,4 B-2																				
5.3	D-1																				
5.4	B-1 C-1																				
5.7	B-1																				

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																
<p>B. PHYSICAL SCIENCE</p> <p>2. Sound, Light, & Heat (con'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • tell how a shadow forms. (Lesson 4) • tell time. 	<ul style="list-style-type: none"> • Listen to this riddle: "I am dark but made of light. I can follow behind you, stand by your side, or lead the way on a sunny day. I can be tall and thin, or big and wide, or almost disappear. What am I?" (your shadow) • Display a jar of paint, an oblong block, and a book place upright. Label each on Wall Chart p. 23. Predict which will make the longest shadow. Shine a light on each and measure the shadows. Record the data on Wall Chart p. 23. Compare to the students' predictions. • Have a volunteer look at the classroom clock and tell what time it is. Discuss the parts of the clock. • Throughout the day, have volunteers read the time at each hour and discuss what the class is doing at that time. Record these in a two column chart. At the end of the day, ask if the same things will happen at the same time tomorrow. 	<ul style="list-style-type: none"> • Flip Chart B30-31 • Lab Manual p. 49 • Wall Chart p. 23 • Jar of paint • Oblong block • Book • Flashlight • Flip Chart B32-33 • Instructional Resources p. 36 • Classroom clock • Chart paper 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.9</td> <td>A-1,2</td> </tr> <tr> <td>5.1</td> <td>A-1,2</td> </tr> <tr> <td></td> <td>B-2</td> </tr> <tr> <td>5.3</td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.9</td> <td>A-2</td> </tr> <tr> <td>5.1</td> <td>A-1,2</td> </tr> </table>	5.9	A-1,2	5.1	A-1,2		B-2	5.3	D-1	5.4	B-1			5.9	A-2	5.1	A-1,2
5.9	A-1,2																				
5.1	A-1,2																				
	B-2																				
5.3	D-1																				
5.4	B-1																				
5.9	A-2																				
5.1	A-1,2																				

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																
<p>B. PHYSICAL SCIENCE</p> <p>2. Sound, Light, & Heat (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • learn that the position and shape of a shadow cast by the sun can change. (Lesson 5) • identify sources of heat. (Lesson 6) 	<ul style="list-style-type: none"> • If you wanted to sit in the shade, would you sit by a tree or a telephone pole? Why? Discuss and illustrate. • On a sunny morning, go out on the blacktop. Choose several volunteers to stand in a line and several others to trace their shadows. Repeat at noon and in the afternoon. Use three different colors of chalk to distinguish shadows. Have students discuss how the shadows change. • Have students cut out magazine pictures of things that give off heat. • Invite students to share their pictures of things that give off heat and use them to develop a picture web on Wall Chart p. 24 	<ul style="list-style-type: none"> • Flip Chart B34-35 • Lab Manual p. 50 • www.sfscience.com • Drawing paper • Blacktop • Colored chalk • Flip Chart B36-37 • Wall Chart p. 24 • Magazines 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.9</td> <td>A-1,2</td> </tr> <tr> <td>5.1</td> <td>A-1,2</td> </tr> <tr> <td></td> <td>B-1,2</td> </tr> <tr> <td>5.3</td> <td>B-1,2</td> </tr> <tr> <td></td> <td>C-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td></td> <td>C-1</td> </tr> <tr> <td>5.9</td> <td>A-1</td> </tr> </table>	5.9	A-1,2	5.1	A-1,2		B-1,2	5.3	B-1,2		C-1	5.4	B-1		C-1	5.9	A-1
5.9	A-1,2																				
5.1	A-1,2																				
	B-1,2																				
5.3	B-1,2																				
	C-1																				
5.4	B-1																				
	C-1																				
5.9	A-1																				

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>B. PHYSICAL SCIENCE</p> <p>2. Sound, Light, & Heat (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • learn that heat moves more easily through some materials than others. (Lesson 7) • identify sources of heat. (Lesson 6) 	<ul style="list-style-type: none"> • Display a foam cup and a metal cup. Ask students which cup they think is better for hot chocolate or hot soup. Tally their responses on Wall Chart p. 25 • Repeat the question following the lesson. Tally the results on Wall Chart p. 25. Then compare the “before” and “after” results. • Have students brainstorm a list of drinks that people enjoy. Decide whether they would put them in a foam or metal cup. • Have students describe what happens to a tray of ice cubes when it is removed from the freezer and allowed to remain on a counter for a while. • Ask: “How do you think you can keep an ice cube frozen without putting it back in the freezer?” List their suggestions on chart paper. • Students can make a trivet out of craft sticks and glue. 	<ul style="list-style-type: none"> • Flip Chart B38-39 • Interactive Transparency #5 • Wall Chart p. 25 • Foam cup • Metal cup • Flip Chart B40-41, 41a • Review Flip Chart p. B42-43 • Lab Manual p. 53, 54 • Chart paper • Craft sticks • Glue 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teachers Assessment Pkg. p. 29-30 	<p>5.6 A-1</p> <p>5.6 A-3 5.1 A-1,2 B-2</p> <p>5.3 A-1,3 B-1,2</p> <p>5.4 B-1 C-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>B. PHYSICAL SCIENCE</p> <p>3. Moving & Working</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • learn new vocabulary words. • identify pushes and pulls as ways to move objects. (Lesson 1) • use a map. 	<ul style="list-style-type: none"> • Ask students to pantomime moving a heavy box as you say “push it,” “pull it,” and “lift it.” Discuss ways a delivery person might make it easier to do this work. • Read the Science Literature Library selection “Harbors” to see boats moving, pushing and pulling. • Sing the song “On the Move” to identify ways that we move things. • Pantomime pulling a rope that is attached to something heavy and pushing something heavy across the room. Invite students to guess what you are doing. • Display Wall Chart p. 27. Have students give examples of things they push or pull and record them on the chart. • Use the map from the Reading Story “The Path on the Map” to review map skills. • Ask students to use a finger to trace a path on the map and use direction words such as forward, backward, left, and right to describe their movements. 	<ul style="list-style-type: none"> • Flip Chart B44-45 • Instructional Resources p. 43 • Songs & Activities Pkg. p. 19-20 • Song cassette • “Harbor” by Donald Crews • Flip Chart B46-47 • Lab Manual p. 55 • Wall Chart p. 27 • Flip Chart p. 48-49 • Instructional Resources p. 44 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<p>5.1 A-1</p> <p>5.1 A-1,2,4 B-2</p> <p>5.4 B-1 5.7 A-1,2</p> <p>5.1 B-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																		
B. PHYSICAL SCIENCE 3. Moving & Working (cont'd.)	Students will be able to: <ul style="list-style-type: none"> • understand that pushes and pulls can change the speed and direction of motion. (Lesson 2) • identify objects that are attracted by magnets. (Lesson 3) • demonstrate and explain that magnets can attract and repel other magnets. (Lesson 4) 	<ul style="list-style-type: none"> • Call on volunteers to demonstrate how to make toy cars move forward, back, to the right and left at various speeds, using the maze on Wall Chart p. 29. • Invite students to brainstorm a list of words that tell about the different ways they moved the toy cars (forward, backward, right left, fast, slow, start, stop, spin). • Have students make and save a list of classroom objects that they think a magnet will attract, or pull toward it. • Tell students to suppose that they dropped a small steel toy car behind a heavy couch. They can see it, but cannot reach it. As how they might get it out. • Have students place a car on the path. Tell them to hold a magnet just above the car and try to move it along the path without allowing the magnets to touch. • Ask someone to explain to someone who has never seen or used a magnet what one is and what it can do. 	<ul style="list-style-type: none"> • Flip Chart B50-51 • Lab Manual p. 56,57 • Wall Chart p. 29 • Toy cars • Flip Chart B52-53 • Lab Manual p. 58 • Chart paper • Flip Chart p. 54-55 • Lab Manual p. 59, 60 • Toy steel car 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">5.1</td> <td style="width: 50%; vertical-align: top;">A-1,2,4 B-1,2</td> </tr> <tr> <td style="vertical-align: top;">5.2</td> <td style="vertical-align: top;">B-1</td> </tr> <tr> <td style="vertical-align: top;">5.4</td> <td style="vertical-align: top;">B-1</td> </tr> <tr> <td style="vertical-align: top;">5.7</td> <td style="vertical-align: top;">C-2 A-1</td> </tr> <tr> <td style="vertical-align: top;">5.1</td> <td style="vertical-align: top;">A-1,2,4 B-1,2</td> </tr> <tr> <td style="vertical-align: top;">5.4</td> <td style="vertical-align: top;">B-1</td> </tr> <tr> <td style="vertical-align: top;">5.1</td> <td style="vertical-align: top;">A-1,2,4 B-1,2</td> </tr> <tr> <td style="vertical-align: top;">5.3</td> <td style="vertical-align: top;">A-1,2,3</td> </tr> <tr> <td style="vertical-align: top;">5.4</td> <td style="vertical-align: top;">B-1 C-1,2</td> </tr> </table>	5.1	A-1,2,4 B-1,2	5.2	B-1	5.4	B-1	5.7	C-2 A-1	5.1	A-1,2,4 B-1,2	5.4	B-1	5.1	A-1,2,4 B-1,2	5.3	A-1,2,3	5.4	B-1 C-1,2
5.1	A-1,2,4 B-1,2																						
5.2	B-1																						
5.4	B-1																						
5.7	C-2 A-1																						
5.1	A-1,2,4 B-1,2																						
5.4	B-1																						
5.1	A-1,2,4 B-1,2																						
5.3	A-1,2,3																						
5.4	B-1 C-1,2																						

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>B. PHYSICAL SCIENCE</p> <p>3. Moving & Working (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • understand that simple machines make work easier. (Lesson 5) • determine the easiest way to lift a book using a ruler as a lever. (Lesson 6) 	<ul style="list-style-type: none"> • Invite students to name some simple machines they use and record their responses on Wall Chart p. 31. • Play Charades. Call on volunteers to act out the following: hammer a nail; screw a screw; sharpen a pencil, dig a hole, cut paper, open a can, load and push a wheelbarrow, open the top of a crate. Have the class name the machine each student is using and tell how it is being used. • Invite students who have played on a seesaw to describe what it is and explain how it works. Draw a picture on the chalkboard to help children visualize. • Have students brainstorm a list of common machines that are levers, such as a crowbar, seesaw, bottle opener, screwdriver, and pan balance. Encourage students to tell where they have seen them and how they are used. • Make a ramp and use it to roll a marble as far as possible. 	<ul style="list-style-type: none"> • Flip Chart B56-57 • Interactive Transparency #6 • Wall Chart p. 31 • Drawing paper • Flip Chart B58-59, B60-61 • Lab Manual p. 61 • Wall Chart p. 32 • Chalkboard • Marbles • Ruler • Book • www.sfscience.com 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<p>5.4 C-2</p> <p>5.1 A-1,2,4 B-1,2</p> <p>5.3 A-1,3 B-1,2</p> <p>5.4 B-1 C-1,2</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>C. EARTH SCIENCE</p> <p>1. The Earth</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • learn about the earth. • use a bar graph. • describe properties of rocks; • tell how rocks can change. (Lesson 1) 	<ul style="list-style-type: none"> • Make a word web centered around the word "Earth." Ask students to suggest words to describe the earth. • Sing the song "On Top of a Mountain." • Read the Science Literature Library Story "Lost!" by David McPhail. • Classify rocks brought in by children. • Create a tally chart to show the number of rainy and sunny days in a given month. • On the chalkboard, draw a simple bar graph showing the number of boys and girls in the class. Ask questions that the students can answer by looking at the graph. • Put several rocks in socks and fasten closed. Have students feel each sock and tell what they think is inside. • Ask: "What words tell about color, size, shape, and texture or feel of rocks?" Record students' responses on Wall Chart p. 34 to create a word web. <p>(continued on next page)</p>	<ul style="list-style-type: none"> • Flip Chart C1-5 • Instructional Resources p. 51 • Chart paper • Songs & Activities Pkg. p. 21-22 • Song cassette • "Lost" by David McPhail • Flip Chart C6-7 • Instructional Resources p. 52 • Chalkboard • Flip Chart C8-9 • Lab Manual p. 65 • Wall Chart p. 34 • Rocks • Socks • Bags 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<p>5.1 A-1,2,3,4 B-2 5.2 A-1 5.4 B-1</p> <p>5.3 D-1</p> <p>5.8 A-1 5.1 A-1,2,4 B-2 5.3 D-1 5.4 B-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>C. EARTH SCIENCE</p> <p>1. The Earth (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • experiment to determine the effects of weathering on chalk. (Lesson 2) 	<ul style="list-style-type: none"> • Encourage students to tell where they have observed rocks. • Place rocks in various locations around the classroom. Have students form groups and provide each group with a bag and a description of rocks to look for. • Have students look at a group of rocks and tell if some of the rocks could be in more than one group. • Tell students to think about a time when they used chalk. Then ask "Have you ever tried to break chalk in half? Have you ever dropped a piece of chalk? What happened?" • Have students look for signs of wear on sidewalks, rock walls, and high traffic areas around the school. • Have students tell some ways that people can change rock. 	<ul style="list-style-type: none"> • Flip Chart C10-11 • Lab Manual p. 67-68 • Chalk 	<ul style="list-style-type: none"> • Teacher Observation 	<p>5.6 A-2 5.1 A-1,2,4 B-1,2 5.3 B-1,2 D-1 5.4 B-1 C-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>C. EARTH SCIENCE</p> <p>1. The Earth (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • use tools to observe, measure and collect data about rocks. • understand that soil is made of many things. • identify uses of soil. (Lesson 3) • examine three different kinds of soil. (Lesson 4) 	<ul style="list-style-type: none"> • Invite students to use various tools to collect data about rocks. • Read “Stone Stoup” by Marcia Brown to the class. After reading, discuss what the stone added to the soup. • Pass around a container of soil. Using Wall Chart p. 35, make a list of things you might see in soil. • If possible, take students outside. Using a shovel or trowel, dig up some soil where grass or other plants are growing. Allow students to observe the roots and look for worms and other living creatures, stones and rocks. • Invite students to tell about their experiences with gardening, making mud pies, sand castles, etc. Ask: “Do you think all soils are the same? Why or why not?” • Write the word “soil: on the chalkboard. Ask students to brainstorm a list of words they would use to describe how soil looks, feels, or smells. • Ask: “What did you learn about soil that you did not know before doing this activity?” 	<ul style="list-style-type: none"> • Flip Chart C11-a • Lab Manual p. 69 • Hand lens, pan balance, dropper • Rocks • Rulers • Flip Chart C12-13 • Wall Chart p. 35 • Soil • Shovel or Trowel • Flip Chart C14-15 • Lab Manual p. 70 • Chalkboard 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<p>5.8 A-1 5.1 A-1,2 B-1,2 5.3 A-1 B-1,2 5.4 B-1</p> <p>5.8 A-1</p> <p>5.6 A-2 5.8 A-1 5.1 A-1,2,4 B-1,2 5.4 B-1 C-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																				
<p>C. EARTH SCIENCE</p> <p>1. The Earth (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • follow a recipe to make compost. • identify air, land, and water as features of the earth. (Lesson 3) • identify ways to use and conserve land, air and water. (Lesson 6) 	<ul style="list-style-type: none"> • Read “The Magic School Bus Inside the Earth” by Joanna Cole, to explore soil, rocks, and the earth’s structure. • Write a class story about a plant or animal living in the soil. • Use colored sand to make sand paintings. • Sing the song, “This is Your Land.” • Ask: “What land features or bodies of water can you name?” Record students’ responses on Wall Chart p. 36. • Illustrate above responses and tape to Wall Chart p. 36. • Invite students to brainstorm things they can do to protect and save the air, land, and water. Record responses on Wall Chart p. 37. • Have students form a circle. Each student makes a true-or-false statement about how to keep land and water clean. Tell students to respond by saying “true” or “false.” 	<ul style="list-style-type: none"> • Flip Chart C15-a • Lab Manual p. 71 • “The Magic School Bus Inside the Earth” by Joanna Cole • Chart paper • Colored sand • Construction paper • Flip Chart C16-17 • Interactive Transparency #7 • Wall Chart p. 36 • Flip Chart C18-19 • Wall Chart p. 37 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.8</td> <td>A-1</td> </tr> <tr> <td>5.1</td> <td>A-1,2</td> </tr> <tr> <td></td> <td>B-1,2</td> </tr> <tr> <td>5.3</td> <td>B-1,2</td> </tr> <tr> <td>5.4</td> <td>B-4</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.8</td> <td>B-1</td> </tr> <tr> <td></td> <td>D-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.8</td> <td>B-1</td> </tr> </table>	5.8	A-1	5.1	A-1,2		B-1,2	5.3	B-1,2	5.4	B-4			5.8	B-1		D-1			5.8	B-1
5.8	A-1																								
5.1	A-1,2																								
	B-1,2																								
5.3	B-1,2																								
5.4	B-4																								
5.8	B-1																								
	D-1																								
5.8	B-1																								

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>C. EARTH SCIENCE</p> <p>1. The Earth (cont'd.)</p> <p>2. Weather</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • learn how some objects can be reused or recycled. • find ways to reuse common objects. (Lesson 7) <ul style="list-style-type: none"> • learn about weather. <ul style="list-style-type: none"> • use a chart. 	<ul style="list-style-type: none"> • Ask students to tell what they know about recycling efforts in their school and community. • Have students begin a list of all the things they throw away in one day. As students share their lists, have them identify items that could have be reused or recycled. • Students can think of a way to reuse a household item and bring it in to share with the class. <ul style="list-style-type: none"> • Ask students what they know about weather. Sing the song, "The Weather Changed." Answer the questions asked in the song. • Read "Ice-Cold Birthday" from the Science Literature Library Selection. <ul style="list-style-type: none"> • Point out and discuss examples of charts displayed in the classroom. 	<ul style="list-style-type: none"> • Flip Chart C15-a • Lab Manual p. 71 • "The Magic School Bus Inside the Earth" by Joanna Cole • Chart paper • Colored sand • Construction paper <ul style="list-style-type: none"> • Flip Chart C24-25 • Instructional Resources p. 59 • Songs & Activities Pkg. p. 23-24 • Song Cassette • "Ice-Cold Birthday" by Maryann Cocca-Lefler <ul style="list-style-type: none"> • Flip Chart C26-27 • Instructional Resources p. 60 	<ul style="list-style-type: none"> • Teacher Observation <ul style="list-style-type: none"> • Teacher Observation <ul style="list-style-type: none"> • Teacher Observation 	<p>5.8 A-1 B-1 D-1</p> <p>5.1 A-1,2,4 B-1,2</p> <p>5.3 A-1,2 5.4 B-1</p> <p>5.4 B-1 5.8 B-3,4</p> <p>5.3 D-1 5.8 B-3,4</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD						
<p>C. EARTH SCIENCE</p> <p>2. Weather (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • describe and record different kinds of weather. (Lesson 1) • make an instrument and use it to observe how hard the wind blows. (Lesson 3) • learn to use a thermometer to measure temperature. • make a weather wheel. 	<ul style="list-style-type: none"> • Have students cut out magazine pictures showing different kinds of weather for a bulletin board display. • Draw a picture of yourself in your favorite kind of weather to be made into a class book. • Ask: "What kinds of things might happen on a windy day?" • Write the word "Wind" on the chalkboard. Ask: "What is wind?" Have students develop their own definitions of wind. Record their responses on chart paper. This can be modified throughout the lesson and chapter. • Invite students to stand up straight and tall and pretend to be the red line in a thermometer on a hot day. Ask them to demonstrate and explain what they think happens to the red line as it gradually gets colder and then hotter again. • Place a thermometer in the window so students can observe the temperature before recess to help them decide if they need to wear their coats. 	<ul style="list-style-type: none"> • Flip Chart C28-29 • Lab Manual p. 75 • Magazines • Drawing paper • Flip Chart C30-31 • Lab Manual p. 76 • Songs & Activities • Chalkboard • Chart paper • Flip Chart C32-33, C33a • Lab Manual p. 77, 78 • Thermometer 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">5.8 5.1 5.3 5.4</td> <td style="width: 50%; vertical-align: top;">B-3,4 A-1,2 B-2 D-1 B-1</td> </tr> <tr> <td style="vertical-align: top;">5.8 5.1 5.4</td> <td style="vertical-align: top;">B-3,4 A-1,2 B-2 B-1 C-1</td> </tr> <tr> <td style="vertical-align: top;">5.8 5.1 5.2 5.3 5.4</td> <td style="vertical-align: top;">B-3,4 A-1,2,4 B-1,2 B-1 A-1,3 B-1,2 D-1 B-1</td> </tr> </table>	5.8 5.1 5.3 5.4	B-3,4 A-1,2 B-2 D-1 B-1	5.8 5.1 5.4	B-3,4 A-1,2 B-2 B-1 C-1	5.8 5.1 5.2 5.3 5.4	B-3,4 A-1,2,4 B-1,2 B-1 A-1,3 B-1,2 D-1 B-1
5.8 5.1 5.3 5.4	B-3,4 A-1,2 B-2 D-1 B-1										
5.8 5.1 5.4	B-3,4 A-1,2 B-2 B-1 C-1										
5.8 5.1 5.2 5.3 5.4	B-3,4 A-1,2,4 B-1,2 B-1 A-1,3 B-1,2 D-1 B-1										

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>C. EARTH SCIENCE</p> <p>2. Weather (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • understand that clouds form when water vapor cools. (Lesson 4) • demonstrate how a cloud is formed (Lesson 5). 	<ul style="list-style-type: none"> • Go outside and have students observe clouds. Encourage them to describe the color, sizes and shapes of the clouds, and how they move. Record their responses on Wall Chart p. 40 • Write the following on the chalkboard: "A cloud is ____." Have students copy and complete the sentence in their journals to tell what they think a cloud really is. • Use a self-developing camera or a video camera to take a series of photographs of a cloud to record how it moved and changed shape and size. • Have students repeat the experiment using very cold water instead of very warm water. • Tell students to pretend they are outside on a very cold winter day. Ask: "What can you see when you breathe out, and what does this show?" 	<ul style="list-style-type: none"> • Flip Chart C34-35 • Interactive Transparency #8 • Wall Chart p. 40 • Chalkboard • Journal • Self-developing camera or video camera • Flip Chart C36-37 • Lab Manual p. 80 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<p>5.8 B-2,3,4</p> <p>5.8 B-2 5.1 A-1,2,4 B-2 5.4 B-1 C-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																		
<p>C. EARTH SCIENCE</p> <p>2. Weather (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • learn how to stay safe in severe weather. • identify how weather changes from season to season. (Lesson 7) 	<ul style="list-style-type: none"> • Have students brainstorm examples of weather that can be harmful and then suggest what they would do to stay safe. • Have students begin bringing in magazine and newspaper articles and photographs about the impact of weather. Discuss and display the articles and photographs. • Invite students to suggest words and phrases to tell about the four seasons. Record their responses on Wall Chart p. 41. • Ask: "What are some foods you associate with different seasons?" Make a list on chart paper. • What are some things that you do outside in more than one season? 	<ul style="list-style-type: none"> • Flip Chart C38-39 • Flip Chart C40-41 • Lab Manual p. 83-84 • Wall Chart p. 41 • Chart paper 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.8</td> <td>B-3,4</td> </tr> <tr> <td>5.1</td> <td>A-1</td> </tr> <tr> <td></td> <td>D-2</td> </tr> <tr> <td>5.3</td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.8</td> <td>B-4</td> </tr> <tr> <td>5.1</td> <td>A-4</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> </table>	5.8	B-3,4	5.1	A-1		D-2	5.3	D-1	5.4	B-1			5.8	B-4	5.1	A-4	5.4	B-1
5.8	B-3,4																						
5.1	A-1																						
	D-2																						
5.3	D-1																						
5.4	B-1																						
5.8	B-4																						
5.1	A-4																						
5.4	B-1																						

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																
<p>C. EARTH SCIENCE</p> <p>3. The Sky (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • compare the day and night skies. (Lesson 1) • understand that heat and light from the sun are necessary for life on Earth. (Lesson 2) 	<ul style="list-style-type: none"> • Label halves of a bulletin board “Day” and “Night.” Have students cut out magazine pictures that show day and night and arrange them under the correct heading. • Using the daily newspaper, help students find the time the sun rises and sets and record it on Wall Chart p. 45. At the end of the week, discuss the changes. • Draw and write a sentence about two living things that need the sun. • Provide two boxes of metal objects. Place one in the sun and one in the shade. After a short time, have the students touch to objects to compare their heat levels. • Ask students to explain what they think would happen to the waters on Earth if there were no sun. 	<ul style="list-style-type: none"> • Flip Chart C48-49 • Lab Manual p. 87 • Wall Chart p. 45 • Bulletin Board • Magazines • Newspaper • Flip Chart C50-51, C51a • Lab Manual p. 88, 89 • Experience paper • Two boxes of metal objects 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.9</td> <td>A-1,2 B-1</td> </tr> <tr> <td>5.1</td> <td>A-1,2 B-2</td> </tr> <tr> <td>5.3</td> <td>B-2</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td>5.9</td> <td>A-1,2</td> </tr> <tr> <td>5.1</td> <td>A-1,4 B-1,2</td> </tr> <tr> <td>5.3</td> <td>A-1,3 B-1,2</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> </table>	5.9	A-1,2 B-1	5.1	A-1,2 B-2	5.3	B-2	5.4	B-1	5.9	A-1,2	5.1	A-1,4 B-1,2	5.3	A-1,3 B-1,2	5.4	B-1
5.9	A-1,2 B-1																				
5.1	A-1,2 B-2																				
5.3	B-2																				
5.4	B-1																				
5.9	A-1,2																				
5.1	A-1,4 B-1,2																				
5.3	A-1,3 B-1,2																				
5.4	B-1																				

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD								
<p>C. EARTH SCIENCE</p> <p>3. The Sky (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • understand that the moon shines with light from the sun; • understand that the moon's appearance changes in different phases. (Lesson 3) • distinguish real from imaginary. 	<ul style="list-style-type: none"> • Ask the students look at the astronaut on the moon on Wall Chart p. 46, ask: "What do you know about the moon?" Record their responses. • Have students correct these sentences: <ul style="list-style-type: none"> – You can see the moon only at night. – You cannot see the moon without a telescope. – The moon always looks round. – The moon makes its own light. – You can see the part of the moon that does not have light shining on it. • Have students provide examples of real and imaginary characters from storybooks, television programs and games. • Play the cloud game. You look at clouds and pretend to see things like animals in the cloud shapes. 	<ul style="list-style-type: none"> • Flip Chart C52-53 • Wall Chart p. 44 • Flip Chart C54-55 • Instructional Resources p. 68 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">5.9</td> <td style="width: 50%; border: none;">A-1,2</td> </tr> <tr> <td style="border: none;">5.3</td> <td style="border: none;">C-1</td> </tr> <tr> <td style="border: none;">5.1</td> <td style="border: none;">A-1</td> </tr> <tr> <td style="border: none;">5-8</td> <td style="border: none;">D-1</td> </tr> </table>	5.9	A-1,2	5.3	C-1	5.1	A-1	5-8	D-1
5.9	A-1,2												
5.3	C-1												
5.1	A-1												
5-8	D-1												

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>C. EARTH SCIENCE</p> <p>3. The Sky (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> describe stars and pictures formed by groups of stars. (Lesson 4) make a model of a group of stars. (Lesson 5) 	<ul style="list-style-type: none"> Invite students to close their eyes and pretend it is night. Ask: "What do you see in the night sky?" Recite the poem "Twinkle, Twinkle, Little Star" with children. Ask: "What do you know about a real star?" Record their responses on Wall Chart p. 47. Draw and label a picture of a group of stars. Provide students with reference books and pictures about groups of stars. Students can make a model of a real constellation using black construction paper and a white crayon. Use black construction paper and a white crayon to show the phases of the moon. 	<ul style="list-style-type: none"> Flip Chart C52-53 Wall Chart p. 44 Flip Chart C58-59, C59a Flip Chart Review C60-61 Lab Manual p. 90, 91 Black construction paper White crayon 	<ul style="list-style-type: none"> Teacher Observation Teacher Observation Teacher Assessment Pkg. p. 53-54 	<p>5.9 A-2 C-1,2 5.3 C-1</p> <p>5.9 A-2 C-2 5.1 B-1 5.3 C-1 5.4 B-1 C-1</p>
<p>D. HUMAN BODY</p> <p>1. The Senses</p>	<ul style="list-style-type: none"> learn about the senses. 	<ul style="list-style-type: none"> Sing the song "Something Cooking." Have students name the five senses and give an example of how or when each sense is used. Read the story "My Five Senses" by Alikei, from the Science Literature Library. 	<ul style="list-style-type: none"> Flip Chart D4-5 Instructional Resources p. 75 Song cassette Songs & Activities Pkg. p. 27-28 "My Five Senses" by Alikei 	<ul style="list-style-type: none"> Teacher Observation 	<p>2.1 B-1 5.1 A-1 5.2 A-1 5.3 C-1</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
<p>D. HUMAN BODY</p> <p>1. The Senses (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • describe what can be observed in a given situation. (Lesson 1) • read captions. • name the five senses and tell how they can be used. (Lesson 2) 	<ul style="list-style-type: none"> • Show students an interesting picture, such as a carnival. Have the students pretend they are in the picture, and identify and describe what they might see, hear, smell, and touch. Record their responses on Wall Chart p. 49. • Ask: "What are all the different ways you can think of to observe a cracker?" • Provide examples of captions in books and magazines. Say, "This picture shows _____. The caption tells more about the picture. The caption says _____." • Have students draw a picture and then write a caption that tells about what they see. • Conceal the label on a bottle of grape or other juice. Pour it into a cup. Challenge the students to determine what the liquid is. Ask: "How could you know the liquid in the cup is grape juice?" List the students' responses on Wall Chart p. 50. • Ask students to point to their eyes and tell how their eyes help them. Repeat with ears, skin, nose, and tongue. 	<ul style="list-style-type: none"> • Flip Chart D6-7 • Lab Manual p. 95 • Wall Chart p. 49 • Picture • Flip Chart D8-9 • Instructional Resources p. 76 • Experience Paper • Flip Chart D10-11 • Interactive Transparency #10 • Wall Chart p.50 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<p>2.1 B-1 5.1 A-1,2,4 B-2 5.4 B-1</p> <p>5.1 B-1,2</p> <p>5.10 A-1 B-1 2.1 B-1 F-3</p>

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																						
<p>D. HUMAN BODY</p> <p>1. The Senses (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • use the sense of hearing to identify sounds. (Lesson 3) • experiment to determine whether you can see better with one eye or two. (Lesson 4) • use their sense of smell to observe and identify different scents. 	<ul style="list-style-type: none"> • Have students close their eyes and listen as you drop a heavy book on your desk. Ask the students to describe the sound and then look at the items on your desk and identify the one they think made it. • Ask: "How might your life be different if you suddenly lost your hearing?" • Have students try to do other common activities while wearing goggles with one eye covered. • Ask students how they think their life would change if they suddenly lost their eyesight. • Students can learn about reading with Braille by using the website. • Students can create art that uses the sense of smell. Make flowers by gluing cotton balls sprayed with perfume on to a construction paper picture. • Students can record in their journals things that they used their senses to notice on a walk outside. • Describe occupations that use the five senses. 	<ul style="list-style-type: none"> • Flip Chart D12-13 • Lab Manual p. 96 • Flip Chart D14-15 • Lab Manual p. 97-98 • Wall Chart p. 51 • www.sfscience.com • Goggles • Flip Chart D15a • Flip Chart Review D16-17 • Lab Manual p. 99 • "You Can't Smell a Flower With Your Ear" by Joanna Cole • Cotton balls/Perfume • Construction paper • Journal 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation • Teacher Assessment Pkg. p. 59-60 	<table border="0"> <tr> <td>2.1</td> <td>A-1</td> </tr> <tr> <td>5.1</td> <td>A-1,2 B-2</td> </tr> <tr> <td>5.3</td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1 C-1</td> </tr> <tr> <td>2.1</td> <td>A-1</td> </tr> <tr> <td>5.1</td> <td>A-1,2,4 B-2</td> </tr> <tr> <td>5.3</td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1 C-1</td> </tr> <tr> <td>5.1</td> <td>A-1,2 B-2</td> </tr> <tr> <td>5.3</td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> </table>	2.1	A-1	5.1	A-1,2 B-2	5.3	D-1	5.4	B-1 C-1	2.1	A-1	5.1	A-1,2,4 B-2	5.3	D-1	5.4	B-1 C-1	5.1	A-1,2 B-2	5.3	D-1	5.4	B-1
2.1	A-1																										
5.1	A-1,2 B-2																										
5.3	D-1																										
5.4	B-1 C-1																										
2.1	A-1																										
5.1	A-1,2,4 B-2																										
5.3	D-1																										
5.4	B-1 C-1																										
5.1	A-1,2 B-2																										
5.3	D-1																										
5.4	B-1																										

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																																				
<p>D. HUMAN BODY</p> <p>2. Growing & Changing</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • to learn about how they have grown and changed over time. • observe and write about changes from babyhood to the present. (Lesson 4) • estimate, then measure objects. 	<ul style="list-style-type: none"> • Discus what the students could do as babies and what they can do now. • Have students sing the song "Could It Be Me?" with the cassette. • Create a KWL Chart about how the body grows and changes. • Read "Arthur's Reading Race" from the Science Literature Library. • Ask students to remember when they were in Kindergarten. Ask them how they are different now in terms of size, height, and so on. Record responses on Wall Chart p. 53. Cut out the pictures and arrange them in order. • Ask students to compare human babies to baby animals. • Review the concept of estimation with the students. Model how to place an object on the ruler and how to read the measurement. 	<ul style="list-style-type: none"> • Flip Chart D18-19 • Instructional Resources p. 83 • Song cassette • Song & Activities Pkg. p. 29-30 • "Arthur's Reading Race" by Marc Brown • Flip Chart D20-21 • Lab Manual p. 101 • Wall Chart p. 53 • Flip Chart D22-23 • Instructional Resources p. 84 • Cm Ruler 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>2.4</td> <td>C-1</td> </tr> <tr> <td>2.1</td> <td>B-1</td> </tr> <tr> <td>5.1</td> <td>A-1</td> </tr> <tr> <td>5.5</td> <td>C-1</td> </tr> <tr> <td>5.10</td> <td>B-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>2.1</td> <td>B-1</td> </tr> <tr> <td>2.4</td> <td>C-1</td> </tr> <tr> <td>5.1</td> <td>A-1</td> </tr> <tr> <td></td> <td>B-2</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.1</td> <td>A-1</td> </tr> <tr> <td></td> <td>B-2</td> </tr> <tr> <td>5.3</td> <td>A-1,3</td> </tr> <tr> <td></td> <td>B-1,2</td> </tr> <tr> <td></td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> </table>	2.4	C-1	2.1	B-1	5.1	A-1	5.5	C-1	5.10	B-1			2.1	B-1	2.4	C-1	5.1	A-1		B-2	5.4	B-1			5.1	A-1		B-2	5.3	A-1,3		B-1,2		D-1	5.4	B-1
2.4	C-1																																								
2.1	B-1																																								
5.1	A-1																																								
5.5	C-1																																								
5.10	B-1																																								
2.1	B-1																																								
2.4	C-1																																								
5.1	A-1																																								
	B-2																																								
5.4	B-1																																								
5.1	A-1																																								
	B-2																																								
5.3	A-1,3																																								
	B-1,2																																								
	D-1																																								
5.4	B-1																																								

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																
<p>D. HUMAN BODY</p> <p>2. Growing & Changing (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • measure body parts. (Lesson 2) • make a time line that shows life events. • learn about how teeth grow. (Lesson 3) 	<ul style="list-style-type: none"> • Ask students to pretend that you are going to knit them a sweater. Ask: "What must I know in order to knit a sweater that fits?" • Have students measure the lines and record the lengths on Wall Chart p. 54. Next, have them find objects in the classroom that have the same length, width, or height, and then draw the objects in the boxes. • Ask students what they expect to be able to do when they are 10, 15, and 20 years old. Students can complete sentences that begin: "When I am 10. . . . ; When I am 15. . . . ; and "When I am 20. . . ." • Read "I Am Growing" to learn that people need food, sleep, and exercise to grow. • Students learn how to care for their teeth by using the website. • Use Wall Chart p. 26 to keep a record of how many teeth students have lost. 	<ul style="list-style-type: none"> • Flip Chart D24-25 • Lab Manual p. 103 • Wall Chart p. 54 • Flip Chart D25a • Lab Manual p. 101 • Writing paper • "I Am Growing" by Mandy Suhr • Flip Chart D26-27 • Wall Chart p. 55 • www.sfscience.com 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>5.1</td> <td>A-1,2,4 B-1,2</td> </tr> <tr> <td>5.3</td> <td>A-1,3 B-1,2 D-1</td> </tr> <tr> <td>5.4</td> <td>B-1 C-1</td> </tr> <tr> <td>2.1</td> <td>A-2 C-1</td> </tr> <tr> <td>5.1</td> <td>A-1,2,4 B-2</td> </tr> <tr> <td>5.3</td> <td>A-1,3 B-1,2 D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td>2.1</td> <td>A-1</td> </tr> </table>	5.1	A-1,2,4 B-1,2	5.3	A-1,3 B-1,2 D-1	5.4	B-1 C-1	2.1	A-2 C-1	5.1	A-1,2,4 B-2	5.3	A-1,3 B-1,2 D-1	5.4	B-1	2.1	A-1
5.1	A-1,2,4 B-1,2																				
5.3	A-1,3 B-1,2 D-1																				
5.4	B-1 C-1																				
2.1	A-2 C-1																				
5.1	A-1,2,4 B-2																				
5.3	A-1,3 B-1,2 D-1																				
5.4	B-1																				
2.1	A-1																				

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																												
<p>D. HUMAN BODY</p> <p>3. Taking Care of Your Health (cont'd.)</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • identify food groups in the Food Guide Pyramid. (Lesson 1) • describe practices that help promote good health, such as exercises, cleanliness, and rest. (Lesson 2) • determine how balance is affected when eyes are open and closed. (Lesson 3) • use illustrations to get information. 	<ul style="list-style-type: none"> • Have students take turns giving clues about foods, such as: "I am red and juicy and I grow on a tree. What am I?" Help students classify the foods as fruits, vegetables, meats and so on. • Students can brainstorm ways to stay healthy. Record their responses on Wall Chart p. 58. • Have students brainstorm ways to stay healthy. Record their responses on Wall Chart p. 58. • Draw a picture that shows your favorite way to get exercise. • Encourage students to identify other ways to prevent the spread of germs. • After the activity, take a poll and tally on many found it easier to balance with eyes open and closed. Color the graph on Wall Chart p. 59. • Ask: "Why do books include pictures/" Guide students to see that pictures help the reader understand the printed words. 	<ul style="list-style-type: none"> • Flip Chart D34-35 • Lab Manual p. 107 • www.sfscience.com • Flip Chart D36-37 • Interactive Transparency #12 • Wall Chart p. 58 • Drawing paper • Flip Chart D38-39 • Lab Manual p. 108 • Wall Chart p. 59 • Flip Chart D40-41 • Instructional Resources p. 92 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation • Teacher Observation 	<table border="0"> <tr> <td>2.1</td> <td>C-2</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td>5.5</td> <td>A-1</td> </tr> <tr> <td>5.10</td> <td>B-1</td> </tr> <tr> <td>2.1</td> <td>A-2</td> </tr> <tr> <td></td> <td>D-4</td> </tr> <tr> <td>2.3</td> <td>A-123</td> </tr> <tr> <td>5.10</td> <td>B-1</td> </tr> <tr> <td>5.1</td> <td>A-1,2</td> </tr> <tr> <td></td> <td>B-2</td> </tr> <tr> <td>5.2</td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td></td> <td>C-1</td> </tr> <tr> <td>5.1</td> <td>B-1</td> </tr> </table>	2.1	C-2	5.4	B-1	5.5	A-1	5.10	B-1	2.1	A-2		D-4	2.3	A-123	5.10	B-1	5.1	A-1,2		B-2	5.2	D-1	5.4	B-1		C-1	5.1	B-1
2.1	C-2																																
5.4	B-1																																
5.5	A-1																																
5.10	B-1																																
2.1	A-2																																
	D-4																																
2.3	A-123																																
5.10	B-1																																
5.1	A-1,2																																
	B-2																																
5.2	D-1																																
5.4	B-1																																
	C-1																																
5.1	B-1																																

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
D. HUMAN BODY 2. Taking Care of Your Health (cont'd.)	Students will be able to: <ul style="list-style-type: none"> • identify ways to stay safe. (Lesson 4) 	<ul style="list-style-type: none"> • Ask students to name situations they encounter at home, at school, and outdoors when they must think about their safety. • Students can brainstorm a list of safety rules for the playground. Record on chart paper. • Read "The Edible Pyramid" to learn about nutrition. 	<ul style="list-style-type: none"> • Flip Chart D42-43 • Chart paper • "The Edible Pyramid" by Loreen Leedy 	<ul style="list-style-type: none"> • Teacher Observation 	2.1 E-1 5.1 A-1,4 B-1,2 5.3 A-1,3 5.4 B-1 5.5 A-1 5.10 B-1
E. YOUR SCIENCE BOOK	<ul style="list-style-type: none"> • use the process skill of observing. • use the process skill of communicating. 	<ul style="list-style-type: none"> • Have students observe an object in the classroom and write a description about that object without naming it. • Students can draw pictures to communicate what a stream, river, lake, or ocean is. After drawing, students will communicate to their classmates what they drew. 	<ul style="list-style-type: none"> • Flip Chart p. 6-7 • Lab Manual p. 113 • Writing paper • Flip Chart p. 8-9 • Lab Manual p. 114 • Drawing paper 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	5.1 A-1,2,4 B-2 5.3 D-1 5.4 B-1 5.1 A-2 5.4 B-1 5.1 A-2 5.4 B-1

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																																				
E. YOUR SCIENCE BOOK (cont'd.)	Students will be able to: <ul style="list-style-type: none"> • use the process skill of classifying. • use the process skill of estimating and measuring. • use the process skill of inferring. • use the process skill of predicting. 	<ul style="list-style-type: none"> • Ask students if they have ever had to classify objects around their house. Ex: unloading the dishwasher, putting away toys, etc. • Students will sort out and classify wooden blocks by color and shape. • Ask students to tell when they have measured objects and what measuring device they used. • Ask students if they know how tall they are. Ask how they found out. Have students estimate their height and then measure. • Have students close their eyes. Drop a handful of coins or paper clips onto a flat surface. Then drop another handful. Ask students to guess which handful had more objects. Ask which sense they think was most helpful. • Ask students if they have seen any patterns in their classroom or their homes. Ask: "How could you tell there was a pattern?" • Have students translate their patterns into number patterns by counting. Ex: 2,2,1 or 1,2,1,2 	<ul style="list-style-type: none"> • Flip Chart p. 10-11 • Lab Manual p. 115 • Blocks • Flip Chart p. 12-13 • Lab Manual p. 116 • Ruler • Flip Chart p. 14-15 • Lab Manual p. 117 • Coins • Clips • Flip Chart p. 16-17 • Lab Manual p. 118 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation • Teacher Observation 	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">5.1</td> <td style="width: 50%;">A-1,4</td> </tr> <tr> <td></td> <td>B-2</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td>5.6</td> <td>A-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.1</td> <td>A-1,2,4</td> </tr> <tr> <td></td> <td>B-1,2</td> </tr> <tr> <td>5.3</td> <td>A-1,2,3</td> </tr> <tr> <td></td> <td>B-1,2</td> </tr> <tr> <td></td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.1</td> <td>A-4</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>5.1</td> <td>A-4</td> </tr> <tr> <td>5.3</td> <td>D-1</td> </tr> <tr> <td>5.4</td> <td>B-1</td> </tr> </table>	5.1	A-1,4		B-2	5.4	B-1	5.6	A-1			5.1	A-1,2,4		B-1,2	5.3	A-1,2,3		B-1,2		D-1	5.4	B-1			5.1	A-4	5.4	B-1			5.1	A-4	5.3	D-1	5.4	B-1
5.1	A-1,4																																								
	B-2																																								
5.4	B-1																																								
5.6	A-1																																								
5.1	A-1,2,4																																								
	B-1,2																																								
5.3	A-1,2,3																																								
	B-1,2																																								
	D-1																																								
5.4	B-1																																								
5.1	A-4																																								
5.4	B-1																																								
5.1	A-4																																								
5.3	D-1																																								
5.4	B-1																																								

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD																		
E. YOUR SCIENCE BOOK (cont'd.)	Students will be able to: <ul style="list-style-type: none"> • use the process skill of making definitions. • use the process skill of making and using models. • use the process skill of giving hypotheses. • use the process skill of collecting data. 	<ul style="list-style-type: none"> • Give each student a word that they can write a definition for. Put their pages together into a class book or dictionary. • Tell students to write a few sentences about what their lives would be like if they could only use the model telephones. What are some of the problems? • Write various questions and hypotheses on the board in random order. Ask: "Which sentences are questions? Which sentences are statements? How do you know." Explain that a hypothesis is a statement. • Have students collect data about the class, such as favorite color, favorite snack, number of siblings, etc. Display the data in a bar graph. 	<ul style="list-style-type: none"> • Flip Chart p. 18-19 • Lab Manual p. 119 • Writing paper • Flip Chart p. 20-21 • Lab Manual p. 120 • Journal • Flip Chart p. 22-23 • Lab Manual p. 121 • Chalkboard • Flip Chart p. 24-25 • Lab Manual p. 122 • Chart paper 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation • Teacher Observation • Teacher Observation 	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">5.1</td> <td style="width: 50%; vertical-align: top;">A-4 B-1</td> </tr> <tr> <td style="vertical-align: top;">5.4</td> <td style="vertical-align: top;">B-1 C-2</td> </tr> <tr> <td style="vertical-align: top;">5.1</td> <td style="vertical-align: top;">A-1,4 B-2</td> </tr> <tr> <td style="vertical-align: top;">5.4</td> <td style="vertical-align: top;">B-1 C-2</td> </tr> <tr> <td style="vertical-align: top;">5.1</td> <td style="vertical-align: top;">A-1,2,4 B-2</td> </tr> <tr> <td style="vertical-align: top;">5.4</td> <td style="vertical-align: top;">B-1</td> </tr> <tr> <td style="vertical-align: top;">5.1</td> <td style="vertical-align: top;">A-1,2,4 B-2</td> </tr> <tr> <td style="vertical-align: top;">5.3</td> <td style="vertical-align: top;">A-2,3 D-1</td> </tr> <tr> <td style="vertical-align: top;">5.4</td> <td style="vertical-align: top;">B-1</td> </tr> </table>	5.1	A-4 B-1	5.4	B-1 C-2	5.1	A-1,4 B-2	5.4	B-1 C-2	5.1	A-1,2,4 B-2	5.4	B-1	5.1	A-1,2,4 B-2	5.3	A-2,3 D-1	5.4	B-1
5.1	A-4 B-1																						
5.4	B-1 C-2																						
5.1	A-1,4 B-2																						
5.4	B-1 C-2																						
5.1	A-1,2,4 B-2																						
5.4	B-1																						
5.1	A-1,2,4 B-2																						
5.3	A-2,3 D-1																						
5.4	B-1																						

**TOWNSHIP OF FRANKLIN PUBLIC SCHOOLS
SCIENCE CURRICULUM
GRADE 1**

SKILL AREA	STUDENT OBJECTIVE	EXAMPLE/ACTIVITIES	RESOURCE/MATERIALS	ASSESSMENT	NJ CORE CURRICULUM STANDARD
E. YOUR SCIENCE BOOK (cont'd.)	Students will be able to: <ul style="list-style-type: none"> • use the process skill of controlling variables. • use the process skill of experimenting 	<ul style="list-style-type: none"> • Display two different sized plastic tubs. Tap on each tub. Ask: "How are the sounds different?" Invite students to think about how the size of the tub affected the sounds made. Explain that the size is the variable. • Ask: "Have you ever made anything at home by dissolving something in water?" Ex: hot chocolate or lemonade. List their responses. 	<ul style="list-style-type: none"> • Flip Chart p. 26-27 • Lab Manual p. 123 • Two different sized plastic tubs • Flip Chart p. 28-29 • Lab Manual p. 124 • Chalkboard 	<ul style="list-style-type: none"> • Teacher Observation • Teacher Observation 	5.1 A-1,2,4 B-2 5.4 B-1 C-2